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Exploring Depression Prevalence and Contributing Factors among Adolescents in Baku, Azerbaijan: A Focus on Orphaned Youth

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Ethical Approval: ethical clearance was obtained from the Ethical Review Board of the Azerbaijan Psychiatry Association. All respondents were provided with a clear explanation of the study's purpose and procedures, and they were given the autonomy to decide whether or not to participate. The confidentiality of responses was ensured through the use of anonymous interviewer-administered questionnaires.

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Abstract

Orphan adolescents, a distinct demographic, often experience deprivation and are susceptible to developing psychiatric disorders, even within well-operated institutions.

Purpose. This study aimed to evaluate the prevalence of depression and identify contributing factors among orphan adolescents residing in orphan centers in Baku, Azerbaijan.

Materials and methods. In 2019, a cross-sectional study involving 215 orphan adolescents in Baku was conducted. All orphan adolescents living in the selected centers were included. Data collection involved structured interviews at the orphan centers using a well-designed questionnaire. The Kocher Adolescent Depression Scale and the MSPSS scale were utilized to gauge the level of depression and perceived social support among the orphans. Following coding, the collected data were entered into EPI Info version 7 and subsequently exported to SPSS version 20 for thorough analysis. Odds ratios (OR) with a 95% confidence interval (CI) were employed to measure associations, considering a p-value < 0.05 as statistically significant in multivariable binary logistic regressions.

Results. The study revealed an overall depression prevalence of 36.4% among orphan adolescents. The majority of participants (66.7%) were aged between 15 and 19 years. Variables significantly associated with depression included perceived social support (OR 5.86; 95% CI 3.47, 9.91), experience of community discrimination (OR 2.68; 95% CI 1.58, 4.56), length of stay (OR 1.90; 95% CI 1.08, 3.35), age of entrance (OR 2.21; 95% CI 1.32, 3.69), and presence of visitors (OR 3.62; 95% CI 2.06, 6.37).

Conclusion. The study underscored a substantial prevalence of depression among orphan adolescents in Baku. Notable contributing factors encompassed low levels of social support, extended lengths of stay, experiences of community discrimination, the

presence of visitors, and younger age of entrance. These findings highlight the need for targeted interventions addressing these variables to promote the mental well-being of orphan adolescents.

Keywords: depression, orphans, mental disorders, deprivation

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Изучение распространенности депрессии и способствующих ей факторов среди подростков-сирот в Баку, Азербайджан: внимание молодежи-сиротам

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Резюме

Статья рассматривает проблему депрессии среди подростков-сирот в Баку, Азербайджан. Подростки-сироты – это особая группа населения, часто подверженная психическим расстройствам из-за депривации.

Цель исследования. Оценить распространенность депрессии и выявить факторы, способствующие ей, среди подростков-сирот, проживающих в детских домах в Баку.

Материалы и методы. В 2019 году было проведено исследование с участием 215 подростков-сирот в Баку. В исследовании использовались структурированные интервью с подростками-сиротами, а также анкеты. Для оценки уровня депрессии и социальной поддержки использовались шкалы подростковой депрессии Кохера и шкала MSPSS. Собранные данные были обработаны с использованием статистических методов.

Результаты. Распространенность депрессии среди подростков-сирот составила 36,4%. Большинство участников (66,7%) были в возрасте от 15 до 19 лет. Были выявлены различные факторы, связанные с депрессией среди подростков-сирот, включая воспринимаемую социальную поддержку, опыт дискриминации в обществе, продолжительность пребывания, возраст входа и наличие посетителей.

Заключение. Исследование подтвердило высокую распространенность депрессии среди подростков-сирот в Баку. В качестве факторов, способствующих депрессии, выявлены недостаток социальной поддержки, дискриминация, длительное пребывание в детских домах, молодой возраст поступления и наличие посетителей.

Подчеркнута необходимость разработки мер для улучшения психического благополучия подростков-сирот путем устранения выявленных факторов.

Ключевые слова: депрессия, подростки-сироты, психические расстройства, депривация

■ INTRODUCTION

Depression is a complex psychological disorder characterized by specific emotional, behavioral, and cognitive patterns. Among adolescents, depression exists along a spectrum including depressed mood, depressive syndrome, and clinical depression. Depressed mood entails transient feelings of sadness in response to negative circumstances. Depressive syndrome involves experiencing anxiety alongside emotions such as sadness, loneliness, worthlessness, and a lack of love. Clinical depression is diagnosed when an individual exhibits five or more depressive symptoms for a continuous two-week period, impairing their day-to-day functioning. Regrettably, depression often goes unnoticed among adolescents due to the misconception that depressive symptoms are a typical facet of their developmental experience [1]. Orphan adolescents constitute a unique group susceptible to psychiatric disorders, even when provided adequate care within well-run institutions [2]. They represent a significant socioeconomic and developmental challenge, particularly in developing countries, as they commonly face an array of multidimensional challenges [3]. Adolescents, in particular, are predisposed to unresolved or complicated grief due to their emotional dependency and developmental vulnerability, leading to psychological issues that can have enduring effects on their present and future [4].

The loss of one or both parents leaves an indelible and lifelong imprint on the psychological well-being of children. Children frequently react to parental death with symptoms such as depression, hopelessness, anxiety, and fear of solitude, which can further jeopardize their prospects [5–7]. Research indicates that orphans are at greater risk of experiencing anxiety, depression, and anger compared to non-orphans [7, 8]. Orphans orphaned by AIDS are also more likely to report symptoms of depression, peer relationship problems, and posttraumatic stress compared to non-orphaned children [9–12]. Various studies conducted in different countries have reported a range of 2.6% to 19.4% of orphan adolescents displaying depressive symptoms [13–24]. In Sub-Saharan Africa, childhood and adolescent depression rates vary from 7.6% to 34.7%. For instance, depression rates were 7.6% in Uganda, 20% in Egypt, and 25.3% to 34.7% in Ethiopia [25–28].

Several studies have indicated that factors such as older age, female gender, and higher educational attainment are associated with an increased risk of developing depression [29–35].

Additionally, research has highlighted that orphaned individuals with low social support, experiences of discrimination, and lack of biological relatives are more susceptible to depressive disorders [36–39]. A 2013 study conducted in Mekelle, Ethiopia, found significant associations between depressive disorder and community and peer discrimination [40]. Orphan adolescents require special care, support, and societal protection due to their vulnerable status as severe socioeconomic victims. This study's findings will contribute significantly to the fields of social and psychological knowledge, shedding light on depression and its associated factors. Moreover, it will aid professionals

in identifying orphaned children who are at risk of poor psychological well-being, facilitating timely intervention and prevention strategies. The aim of this study is to assess the prevalence of depression and identify associated factors among orphan adolescents living in orphan centers in Baku, Azerbaijan.

■ MATERIALS AND METHODS

Study Design, Setting, Participants, and Sampling Procedure

A cross-sectional study was carried out in Baku centers during the period from May 1st to May 30th, 2021. Among the organizations providing care and support to orphans in Baku, three were selected for inclusion in the study using random sampling. These organizations were Gymnasium, SOS Kinder Village, and Lyceum. All orphan adolescents aged 10–19 residing in the selected orphan centers were eligible to participate. The sample size was determined using the single population proportion formula for descriptive analysis, and EPI Info version 7 was employed for assessing associated factors. A comprehensive survey was conducted across the six selected orphan centers to compile lists of eligible orphans prior to data collection. In total, 215 orphan adolescents were identified. As the calculated sample size (245) closely matched the number of orphans (215) within the selected centers, the entire population of adolescent orphans was included in the study.

Data Collection Tools, Quality Control, and Study Variables

A structured questionnaire was administered through interviews to assess depression using the Kocher Adolescent Depression Scale, which contains six items. Each item's score ranges from zero to three, with a total subscale score of 6 or higher indicating the presence of depression [36].

Data collection was performed by interviewing eligible orphan adolescents within their respective orphan centers. A team consisting of six psychiatric residents and one supervisor was appointed for data collection. Prior to commencing data collection, a two-day training session was conducted for both data collectors and supervisors. Supervisors also carried out random spot checks on questionnaires during data collection to ensure data reliability.

To maintain consistency, the questions were initially prepared in English, then translated into Azeri language, and finally back-translated into English. A pretest involving 44 respondents (5% of the total sample size) was conducted five days before data collection in non-selected Azeri orphan centers. Necessary adjustments were made based on pretest findings.

Data Processing and Analysis

Following coding, the collected data were entered into EPI Info version 7 and subsequently exported to SPSS version 20 for analysis. Descriptive statistics such as frequency, percentage, and cross-tabulation were computed. Bivariate logistic regression was employed to identify significant associations between dependent and independent variables. Variables with a p-value less than 0.25 were entered into multivariable logistic regression to control for potential confounders and examine interactions between variables. A significance level of $p < 0.05$ was considered statistically significant for relationships between dependent and independent variables. The study included sociodemographic, individual, and social factors as variables of interest.

Table 1
Sociodemographic characteristics of orphan adolescents in Baku, July 2021 (N=215)

Variables	Category	frequency	%
Age	10–14	51	33.3
	15–19	152	66.7
Sex	Male	100	54.7
	Female	115	45.3
Religion	Orthodox	1	51.7
	Muslim	204	4.2
	Catholic	5	35.3
	Protestant	5	8.8
Educational status	Primary	115	54.3
	High school	95	43.9
	College	5	1.8

■ RESULTS

Sociodemographic Characteristics of Respondents

Out of 265 eligible orphan adolescents, 215 participated, yielding a response rate of 97.4%. The largest portion of respondents (38%) fell within the 15–19 age range. In terms of education, 54% were from primary school, 43% were from high school, and 1.8% were from college (Table 1). Regarding the age of entrance into the orphanage, 60% joined between ages 0 and 5, while 40% joined at age 6 and above.

Factors Associated with Depression

Upon controlling for all variables, the final model revealed five factors significantly contributing to the outcome of depression with a p-value of <0.05. Orphan adolescents who entered the orphanage before the age of 5 were nearly twice as likely to experience depression (OR=1.9; 95% CI: 1.186, 2.994) compared to those who entered after the age of 5. Individuals with lower levels of social support were significantly more prone to developing depression (OR=5.3; 95% CI=3.2, 8.8) – approximately 5.3 times more likely – when compared to those with higher levels of social support.

In terms of length of stay, those with a longer duration of residence had approximately twice the chance of developing depression (OR=1.8; 95% CI=1.019, 3.155). Similarly, with regards to visitors, those who lacked visitors in the orphanage had a significantly higher likelihood of experiencing depression (OR=3.487; 95% CI=2.081, 5.843), with a roughly 3.5 times greater chance (Table 2).

■ DISCUSSION

The present study reveals a depression prevalence of 28.4% among orphan adolescents. This rate aligns closely with a study conducted in Turkey, which reported a prevalence of 29.7% [27]. However, it surpasses depression rates in countries such as the USA (5.7%) [13], Sweden (5.8%) [16], and Bangladesh (15%) [21]. Variations in prevalence could be attributed to differences in measurement instruments, cultural contexts, and societal factors. Similarly, the current study's prevalence exceeds rates found in Turkey (29%) [24], Egypt (20%) [26], and Mekelle (25.3%) [28]. This discrepancy may be linked to heightened community discrimination, reduced social support, and a younger age of entrance into

Table 2
A multivariable logistic regression of associated factors with depression among orphan adolescents in Baku, Azerbaijan, Jul 2021 (N=215)

Variables	Category	Depression		Crude OR	Adjusted OR
		yes	no	(95% CI)	(95% CI)
Age	10–14	65	51	1	1
	15–19	97	85	1.18 (.78, 1.79)	.98 (.53, 1.79)
Sex	Male	100	58	1	1
	Female	115	37	1.094	.83 (.53, 1.31)
Educational status	Primary	61	15	1	1
	High school	53	36	1.15 (.78, 1.70)	.22 (.04, 1.19)
	College	4	4	1.88 (.45, 7.71)	.24 (.04, 1.28)
Age of entrance	0–5	68	44	1.83 (1.12, 2.75)	2.21 (1.32, 3.69)
	6 and above	70	51	1	1
Orphan type	Maternal	19	11	1	1
	Paternal	48	27	.972 (.40, 2.34)	2.03 (.809, 5.13)
	Double	91	17	.993 (.458, 2.15)	1.38 (.730, 2.64)
Length of stay	0–5	75	27	1	1
	6 and above	73	38	1.80 (1.10, 2.93)	1.90 (1.08, 3.35)
Presence of biological relatives	Yes	53	29	1	1
	No	135	86	1.05 (.64, 1.74)	.82 (.43, 1.53)
Presence of visitors	Yes	104	73	1	1
	No	184	92	.712 (.48, 1.05)	3.62 (2.06, 6.37)
Community discrimination	Yes	37	60	3.87 (2.42, 6.19)	2.68 (1.58, 4.56)
	No	251	105		1
Perceived social support	Low	77	101	4.32 (2.87, 6.50)	5.86 (3.47, 9.91)
	Moderate	101	64	.1	1

orphanages, rendering orphan adolescents more susceptible to depression than those in previous studies.

The study reveals significant associations between depressive disorder and factors such as social support and community discrimination. Adolescents with low social support are nearly six times more likely to develop depression than those with moderate support. This finding is corroborated by a study in Mekelle [40], which demonstrates that low social support is linked to various psychological, social, and academic outcomes. Additionally, depression is associated with community discrimination, with orphans experiencing discrimination being 2.68 times more likely to develop depression. This finding is consistent with similar studies in India [37], potentially stemming from the isolating effect of perceived societal exclusion.

Depression is also linked to the length of stay in orphanages. Adolescents with longer durations of residence are 1.9 times more likely to suffer from depressive disorders, a result congruent with research conducted in Baku [36]. This could be attributed to prolonged separation from their families and a subsequent sense of hopelessness and loneliness. Similarly, the age of entrance into orphanages has a significant association with depression. Those who enter before the age of 5 are 2.2 times more likely to develop depression compared to those entering after age 6. A comparable study in Baku also

noted that early entry into orphanages is associated with depression [36], possibly due to the absence of early parental rearing as a risk factor.

Another significant factor impacting depression is the presence of visitors in orphanage centers. Adolescents lacking visitors are 3.6 times more likely to experience depression. Feelings of loneliness and isolation may contribute to this vulnerability. While age, sex, educational status, orphan type, and biological relatives did not show significant associations with depressive disorder, practical observations indicate that depression tends to increase with age. Females exhibited higher rates of depression compared to males, college students displayed higher rates than those in primary or secondary education, double orphans experienced more depression than maternal or paternal orphans, and orphans without biological relatives in the orphanage exhibited higher levels of depression compared to those with relatives.

■ CONCLUSION

This study highlights the significant prevalence of depression among orphan adolescents in Baku. Factors such as low social support, community discrimination, longer durations of stay, younger age of entrance, and absence of visitors contribute to heightened vulnerability to depression. Addressing these factors through targeted interventions is crucial for improving the mental well-being of orphan adolescents.

Limitations of the Study

This study is subject to certain limitations. Firstly, the instrument used in this study had not been previously validated for use in Azerbaijan, potentially affecting the accuracy of the collected data. Additionally, the participants were exclusively drawn from orphan centers in Baku, which restricts the generalizability of the findings solely to orphan adolescents in this city. As a result, future studies should aim to encompass a more diverse and representative sample.

In conclusion, this study underscores a notably high prevalence of depression among orphan adolescents. A substantial portion of these adolescents grapple with emotional and psychological challenges that can significantly impact their present and future lives. Key variables such as low social support, community discrimination, extended lengths of stay, lack of visitors, and early entrance into orphanages are strongly associated with depression.

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